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(54) **METHOD AND APPARATUS FOR  
AUTOMATIC GENERATION OF  
INFORMATION SYSTEM USER INTERFACES**

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717/105; 717/136

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See application file for complete search history.

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(57) **ABSTRACT**

A system for automatic software production including speci-  
fication and automatic generation of user interfaces is dis-  
closed. A graphical editor presents diagrams and textual inter-  
active dialogs which are used to enter requirements data  
defining the desired structure and behaviour of an application  
program being designed. The requirements data is automati-  
cally converted to formal counterparts in a formal language to  
create a Formal Specification. The Formal Specification is  
stored in translation structures which are object in memory  
taking the form of classes which have methods to use the  
requirements data to articulate source code templates which  
become source code components in the final output code. A  
Presentation Model based in a pattern language is used to  
specify a Presentation Model) using elements of the pattern  
language as meta-model building blocks which are articu-  
lated with requirements data that defines the specifics of the  
desired user interface.

**30 Claims, 46 Drawing Sheets**

